

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 Claim 1 (previously presented): A method comprising:
 2 a) receiving a message for establishing a
 3 label-switched path;
 4 b) determining whether or not the message includes
 5 extended information;
 6 c) if the message does not include extended
 7 information, determining, using a first part of the message
 8 and routing information, whether or not to generate a
 9 further message to signal the label-switched path; and
 10 d) if the message does include extended information,
 11 determining, using a second part of the message and routing
 12 information, whether or not to generate a further message
 13 to signal the label-switched path.

1 Claim 2 (original): The method of claim 1, wherein the
 2 message is a label-mapping message.

1 Claim 3 (original): The method of claim 1, wherein the
 2 message includes a FEC-label association.

1 Claim 4 (original): The method of claim 1, wherein the
 2 message includes a label distribution protocol
 3 label-mapping.

1 Claim 5 (original): The method of claim 1, wherein the
 2 routing information was determined using an interior
 3 gateway protocol.

1 Claim 6 (original): The method of claim 1, wherein the
2 extended information includes resolution next hop
3 information.

1 Claim 7 (original): The method of claim 6, wherein the
2 resolution next hop information includes a host address or
3 prefix.

1 Claim 8 (original): The method of claim 7, wherein the
2 method is performed by a first node in a network domain,
3 and
4 wherein the host address or prefix is of a second node
5 in the network domain.

1 Claim 9 (original): The method of claim 8, wherein the
2 second node is an autonomous system border router.

1 Claim 10 (original): The method of claim 8, wherein the
2 first node runs an interior gateway protocol for generating
3 routing information in the first node, and
4 wherein the routing information includes an entry for
5 the second node.

1 Claim 11 (original): The method of claim 1, wherein the
2 first part of the message includes an address or prefix of
3 a node.

1 Claim 12 (original): The method of claim 11, wherein the
2 node is an ingress node of the label-switched path.

1 Claim 13 (original): The method of claim 12, wherein the
2 method is performed by a second node in a first network
3 domain, and
4 wherein the ingress node is in a second network
5 domain.

1 Claim 14 (previously presented): A machine-readable
2 storage device storing a machine-readable message
3 comprising:
4 a) a first field including a label stored in
5 association with a label-switched path;
6 b) a second field including forwarding equivalency
7 class information stored in association with the
8 label-switched path; and
9 c) a third field including label-switched path
10 signaling resolution information stored in association with
11 the label-switched path, the label-switched path signaling
12 resolution information including one of a host address and
13 a host prefix,
14 wherein a forwarding device, receiving the
15 message, processes the message to (1) determine whether or
16 not the forwarding device has a routing table entry that
17 matches at least one of (A) the forwarding equivalency
18 class information included in the second field, and (B) the
19 host address or the host prefix included in the third
20 field, and (2) use the label included in the first field
21 for forwarding data only if the forwarding device
22 determined that the forwarding device has a routing table
23 entry that matches at least one of (A) the forwarding
24 equivalency class information included in the second field,
25 and (B) the host address or the host prefix included in the
26 third field.

Claim 15 (canceled)

1 Claim 16 (previously presented): The machine-readable
 2 storage device of claim 14, wherein the forwarding
 3 equivalency class information includes an address or prefix
 4 of a second node in a remote network domain, and
 5 wherein the host address or the host prefix included
 6 in the third field is of a first node which is in a local
 7 network domain, and
 8 wherein the data forwarding device is in the local
 9 network domain.

1 Claim 17 (original): The machine-readable storage device
 2 of claim 16, wherein the first node is an autonomous system
 3 border router.

Claim 18 (canceled)

1 Claim 19 (original): The machine-readable storage device
 2 of claim 14, wherein the message is a label mapping
 3 message.

Claims 20-23 (canceled)

1 Claim 24 (original): The machine-readable storage device
 2 of claim 14, wherein the message is a label distribution
 3 protocol label mapping message.

1 Claim 25 (currently amended): Elements comprising:
 2 a) one or more processors;
 3 b) at least one input device; and

4 c) one or more storage devices storing
 5 processor-executable instructions which, when executed
 6 by one or more processors, perform a method of:
 7 i) ~~[[a] means for]~~ receiving a message for
 8 establishing a label-switched path;
 9 ii) ~~[[b] means for]~~ determining whether or not
 10 the message includes extended information;
 11 iii) ~~[[c] means for]~~ determining, using a first
 12 part of the message and routing information, whether
 13 or not to generate a further message to signal the
 14 label-switched path if the message does not include
 15 extended information; and
 16 iv) ~~[[d] means for]~~ determining, using a second
 17 part of the message and routing information, whether
 18 or nor to generate a further message to signal the
 19 label-switched path if the message does include
 20 extended information.

1 Claim 26 (original): The elements of claim 25, wherein the
 2 message is a label-mapping message.

1 Claim 27 (original): The elements of claim 25, wherein the
 2 message includes a FEC-label association.

1 Claim 28 (original): The elements of claim 25, wherein the
 2 message includes a label distribution protocol
 3 label-mapping.

1 Claim 29 (original): The elements of claim 25, wherein the
 2 routing information was determined using an interior
 3 gateway protocol.

1 Claim 30 (original): The elements of claim 25, wherein the
2 extended information includes resolution next hop
3 information.

1 Claim 31 (original): The elements of claim 30, wherein the
2 resolution next hop information includes a host address or
3 prefix.

1 Claim 32 (original): The elements of claim 31, wherein the
2 elements are included in a first node in a network domain,
3 and
4 wherein the host address or prefix is of a second node
5 in the network domain.

1 Claim 33 (original): The elements of claim 32, wherein the
2 second node is an autonomous system border router.

1 Claim 34 (original): The elements of claim 32, wherein the
2 first node runs an interior gateway protocol for generating
3 routing information in the first node, and
4 wherein the routing information includes an entry for
5 the second node.

1 Claim 35 (original): The elements of claim 25, wherein the
2 first part of the message includes an address or prefix of
3 a node.

1 Claim 36 (original): The elements of claim 35, wherein the
2 node is an ingress node of the label-switched path.

1 Claim 37 (original): The elements of claim 36, wherein the
 2 elements are included in a second node in a first network
 3 domain, and
 4 wherein the ingress node is in a second network
 5 domain.

1 Claim 38 (previously presented): The method of claim 1,
 2 wherein the second part of the message includes at least
 3 one of a host address and a host prefix corresponding to a
 4 node within a local network domain.

1 Claim 39 (previously presented): The elements of claim 25,
 2 wherein the second part of the message includes at least
 3 one of a host address and a host prefix corresponding to a
 4 node within a local network domain.

1 Claim 40 (previously presented): The method of claim 1,
 2 further comprising:
 3 d) generating, if it is determined to generate a
 4 further message to signal the label-switched path, a
 5 label mapping message.

1 Claim 41 (previously presented): The method of claim 1,
 2 further comprising:
 3 d) generating, if it is determined to generate a
 4 further message to signal the label-switched path, a
 5 label mapping message including an outgoing label; and
 6 e) creating a forwarding state binding between the
 7 outgoing label and a label in the message.

1 Claim 42 (currently amended): The elements of claim 25,
 2 wherein the method performed when the stored

3 processor-executable instructions are executed by the one
4 or more processors further includes ~~[[comprising]]~~:
5 v) ~~[[d) a means for]]~~ generating, if it is determined
6 to generate a further message to signal the
7 label-switched path, a label mapping message.

1 Claim 43 (currently amended): The elements of claim 25,
2 wherein the method performed when the stored
3 processor-executable instructions are executed by the one
4 or more processors further includes ~~[[comprising]]~~:
5 v) ~~[[d) a means for]]~~ generating, if it is determined
6 to generate a further message to signal the
7 label-switched path, a label mapping message including
8 an outgoing label; and
9 vi) ~~[[e) a means for]]~~ creating a forwarding state
10 binding between the outgoing label and a label in the
11 message.

1 Claim 44 (previously presented): A method for use by a
2 data forwarding device comprising:
3 a) receiving a first message for establishing a first
4 label-switched path;
5 b) determining that the first message does not
6 include extended information;
7 c) finding a first label-switched route matching a
8 first part of the first message;
9 d) determining that an interface of the first
10 matching label-switched route found matches an interface on
11 which the first message was received;
12 e) generating a first further message to signal the
13 first label-switched path;

14 f) receiving a second message for establishing a
 15 second label-switched path;
 16 g) determining that the second message includes
 17 extended information;
 18 h) finding a second label-switched route using a
 19 second part of the second message;
 20 i) determining that an interface of the second
 21 matching label-switched route found matches an interface on
 22 which the second message was received; and
 23 j) generating a second further message to signal the
 24 second label-switched path.

1 Claim 45 (previously presented): The method of claim 1
 2 wherein the first part of the message includes a FEC-label
 3 association.

1 Claim 46 (previously presented): The method of claim 1
 2 wherein the first part of the message includes a label
 3 distribution protocol label-mapping.

1 Claim 47 (previously presented): The method of claim 1
 2 wherein the second part of the message includes resolution
 3 next hop information.

1 Claim 48 (previously presented): The method of claim 1
 2 wherein the further message generated is a label mapping
 3 message.